

## **2014 Evaluation of Weed Management Systems in Field Corn in Rochester, MN.**

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The objective of this trial was to evaluate the performance of herbicide programs for weed control in field corn in southeastern Minnesota. The research site was a Lawler loam series with a pH of 6.6, O.M. of 2.4%, and soil test P and K levels of 39 ppm and 113 ppm, respectively. Spring fertilizer was broadcast on April 28, 2014 ahead of planting at a rate of 119-18-149-24 (N-P-K-S). The field was spring, disked and field cultivated once prior to planting. The previous crop was soybean. The corn hybrid, DeKalb DKC44-13 RIB, was planted on May 14, 2014 at a depth of 1.5 inches in 30 inch rows at a rate of 32,000 seeds per acre. A randomized complete block design was used with four replications. Preemergence (PRE) and postemergence (POST) treatments were applied with a tractor-mounted sprayer delivering 15 gpa at 40 psi using TTI 110015 spray tips. Evaluations of the plots were taken on June 2, 9, 16 and 24<sup>th</sup>. The center two rows of each plot were machine harvested on October 29, 2014. Application dates, environmental conditions, and weed stages can be found in Table 1. Performance ratings for giant ragweed control, common lambsquarters control, common waterhemp control, grass control, and crop injury can be found in Tables 2 through 6, respectively. (University of Minnesota Extension Regional Office, Rochester)

**Table 1. Application timing, plant stage, and environmental conditions.**

<b>Date</b>	<b>5/14</b>	<b>5/30</b>	<b>6/3</b>	<b>6/6</b>	<b>6/16</b>
<b>Treatment</b>	PRE	POST I	POST II	POST III	POST IV
<b>Temperature (F)</b>					
Air	59	68.2	63	80	79
Soil	57.6	68.2	62.8	78.4	73.8
<b>Relative Humidity (%)</b>	37	55	70	43	50
<b>Wind (mph)</b>	6	10	10	5	26
<b>Soil Moisture</b>	Adequate	Adequate	Adequate	Adequate	Adequate
<b>Corn</b>					
Stage		V2	V3	V5	V7
Height (inch)		3.5	6.5	12.0	21.0
<b>Giant Ragweed</b>					
Weed density (ft <sup>2</sup> )			16		
Height (inch)		2.13	3.0	2.6	4.63
<b>Common Lambsquarters</b>					
Weed density (ft <sup>2</sup> )			11		
Height (inch)		0.5	0.92	2.0	2.75
<b>Common Waterhemp</b>					
Weed density (ft <sup>2</sup> )			8		
Height (inch)		0.25	0.69	3.13	3.38
<b>Grass</b>					
Weed density (ft <sup>2</sup> )			3		
Height (inch)		1.0	1.16	2.0	2.13
<b>Rainfall after each application (inch)</b>					
Week 1	0.48	1.10	0.04	0.06	4.10
Week 2	0.03	0.06	3.86	5.92	1.60
Week 3	1.06	5.92	2.48	0.58	0.00

**Table 2. Performance of herbicide systems for giant ragweed control in field corn on June 2, 9, 16 and 24 and grain yield at 15 percent moisture at Rochester, MN, in 2014.**

Treatment	Rate (rate/A)	Giant Ragweed Control				Yield (bu/A)
		6/2	6/9	6/16	6/24	
		(% Control)				
Untreated Check		0	0	0	0	27
Weed Free		100	93	93	100	180
<b>PRE</b>						
Keystone + Hornet WDG	2 qt/a + 3 oz/a	91	93	90	86	167
<b>PRE / POST II</b>						
Harness / Laudis + Clarity + Destiny HC + N-Pa-K AMS	1.7 pt/a / 3 oz/a + 8 oz/a + 0.5 % v/v + 2 qt/a	13	86	91	89	149
Breakfree / Realm Q + Abundit Extra + NIS + N-Pa-K AMS	1.5 pt/a / 4 oz/a + 32 oz/a + 0.25 % v/v + 3 qt/a	13	94	88	85	159
Breakfree / Realm Q + Abundit Extra + NIS + N-Pa-K AMS	2.5 pt/a / 4 oz/a + 32 oz/a + 0.25% v/v + 3 qt/a	30	94	89	88	160
Harness/ Roundup Power Max + N-Pa-K AMS	1.25 pt/a / 32 oz/a + 3 qt/a	9	92	88	79	152
Dual Magnum II / Halex GT + NorthStar + NIS + N-Pa-K AMS	2 pt/a / 3.6 pt/a + 2.5 oz/a + 0.25% v/v + 3 qt/a	0	93	90	90	143
Harness / Impact + Roundup Power Max + Destiny HC + N-Pa-K AMS	1.75 pt/a / 0.75 oz/a + 32 oz/a + 0.5 % v/v + 3 qt/a	25	94	90	84	142
<b>PRE / POST III (V4- V5 corn)</b>						
Zemax / Halex GT + Atrazine + NIS + N-Pa-K-AMS	1.5 qt/a / 3.6 pt/a + 1 pt/a + 0.25% v/v + 3 qt/a	68	90	94	95	180
Corvus/ Laudis + Clarity + Roundup Power Max + Destiny HC+ N-Pa-K-AMS	5.6 oz/a / 3 oz/a + 8 oz/a +32 oz/a 0.5% v/v + 2 qt/a	85	92	95	93	173
Breakfree ATZ Lite + Insigate / Abundit Extra + N-Pa-K AMS	2 qt/a + 6 oz/a / 32 oz/a + 3 qt/a	87	93	94	93	152
Zemax / Callisto GT + Atrazine + NIS + N-Pa-K AMS	1.5 qt/a / 2 pt/a + 1 pt/a + 0.25% v/v + 3 qt/a	72	89	95	94	157
Surestart II / Durango + N-Pa-K AMS	2 pt/a / 24 oz/a + 3 qt/a	87	83	93	86	148
Surestart II / Durango + N-Pa-K AMS	2.5 pt/a / 24 oz/a + 3 qt/a	86	83	92	88	156
Verdict / Armezon + Outlook + Roundup Power Max + NIS+ N-Pa-K AMS	18 oz/a / 0.5 oz/a + 12 oz/a + 22 oz/a + 0.25% v/v + 3 qt/a	92	93	97	95	150
Verdict / Roundup Power Max + Status + NIS + N-Pa-K AMS	16 oz/a / 32 oz/a + 2.5 oz/a + 0.25 % v/v + 3 qt/a	86	89	96	93	174
Anthem + Stanza / Roundup Power Max + N-Pa-K AMS	10 oz/a + 5 oz/a / 32 oz/a + 3 qt/a	90	88	95	91	160
Verdict / Roundup Power Max + Status + NIS + N-Pa-K AMS	16 oz/a / 32 oz/a + 5 oz/a + 0.25% v/v + 3 qt/a	80	89	97	92	174
<b>POST I (1 inch weeds )</b>						
Roundup WeatherMax + Dual Magnum + Laudis + Clarity + Destiny HC+ N-Pa-K AMS	32 oz/a + 1.33 pt/a + 3 oz/a + 8 oz/a + 0.5% v/v + 2 qt/a	96	92	88	86	186
Roundup WeatherMax + N-Pa-K AMS	32 oz/a + 2 qt/a	90	80	75	66	125
<b>POST I / POST IV (2-4 inch weeds) / POST IV (2-4 in regrowth)</b>						
Roundup WeatherMax + N-Pa-K AMS / Roundup WeatherMax + N-Pa-K AMS	32 oz/ a+ 3 qt/a / 32 oz/a + 3 qt/a	91	78	71	91	186
<b>POST II (2-4 inch weeds)</b>						
Harness Extra + Impact + Roundup Power Max + Destiny HC + N-Pa-K AMS	2.4 pt/a + 0.75 oz/a + 32 oz/a + 0.5% v/v 3 qt/a	0	90	88	84	160
Solstice + Roundup Power Max + COC + N-Pa-K AMS	3 oz/a + 32 oz/a + 1 % v/v + 3 qt/a	0	88	87	83	171
SureStart II + Durango + N-Pa-K AMS	2 pt/a + 32 oz/a + 3 qt/a	0	90	86	79	185
Realm Q + Abundit Extra + NIS + N-Pa-K AMS	4 oz/a + 32 oz/a + 0.25% v/v + 3 qta	0	88	86	80	165
<b>POST II / POST IV</b>						
Capreno + Roundup Power Max + N-Pa-K AMS / Laudis + Destiny HC + N-Pa-K AMS	3 oz/a + 18 oz/a + 2 qt/a / 3 oz/a + 0.5% v/v + 2 qt/a	0	89	86	93	139
<b>POST III</b>						
Roundup WeatherMax + N-Pa-K AMS	32 oz/a + 2 qt/a	0	70	92	85	145
	<b>LSD (P=0.10)</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>(P=0.20) 26</b>

**Table 3. Performance of herbicide systems for common lambquarters control in field corn on June 2, 9, 16 and 24 and grain yield at 15 moisture at Rochester, MN, in 2014.**

Treatment	Rate (rate/A)	Common Lambsquarters				Yield (bu/A)
		6/2	6/9	6/16	6/24	
		(% Control)				
Untreated Check		0	0	0	0	27
Weed Free		100	100	100	100	180
<b>PRE</b>						
Keystone + Hornet WDG	2 qt/a + 3 oz/a	99	99	99	99	167
<b>PRE / POST II</b>						
Harness / Laudis + Clarity + Destiny HC + N-Pa-K AMS	1.7 pt/a / 3 oz/a + 8 oz/a + 0.5 % v/v + 2 qt/a	99	99	99	99	149
Breakfree / Realm Q + Abundit Extra + NIS + N-Pa-K AMS	1.5 pt/a / 4 oz/a + 32 oz/a + 0.25 % v/v + 3 qt/a	99	99	99	99	159
Breakfree / Realm Q + Abundit Extra + NIS + N-Pa-K AMS	2.5 pt/a / 4 oz/a + 32 oz/a + 0.25% v/v + 3 qt/a	99	99	99	99	160
Harness/ Roundup Power Max + N-Pa-K AMS	1.25 pt/a / 32 oz/a + 3 qt/a	99	99	99	94	152
Dual Magnum II / Halex GT + NorthStar + NIS + N-Pa-K AMS	2 pt/a / 3.6 pt/a + 2.5 oz/a + 0.25% v/v + 3 qt/a	95	99	99	99	143
Harness / Impact + Roundup Power Max + Destiny HC + N-Pa-K AMS	1.75 pt/a / 0.75 oz/a + 32 oz/a + 0.5 % v/v + 3 qt/a	99	99	99	96	142
<b>PRE / POST III (V4- V5 corn)</b>						
Zemax / Halex GT + Atrazine + NIS + N-Pa-K-AMS	1.5 qt/a / 3.6 pt/a + 1 pt/a + 0.25% v/v + 3 qt/a	99	99	99	99	180
Corvus/ Laudis + Clarity + Roundup Power Max + Destiny HC+ N-Pa-K-AMS	5.6 oz/a / 3 oz/a + 8 oz/a +32 oz/a 0.5% v/v + 2 qt/a	99	99	99	99	173
Breakfree ATZ Lite + Insigate / Abundit Extra + N-Pa-K AMS	2 qt/a + 6 oz/a / 32 oz/a + 3 qt/a	99	99	99	99	152
Zemax / Callisto GT + Atrazine + NIS + N-Pa-K AMS	1.5 qt/a / 2 pt/a + 1 pt/a + 0.25% v/v + 3 qt/a	99	99	99	99	157
Surestart II / Durango + N-Pa-K AMS	2 pt/a / 24 oz/a + 3 qt/a	99	99	99	98	148
Surestart II / Durango + N-Pa-K AMS	2.5 pt/a / 24 oz/a + 3 qt/a	99	99	99	99	156
Verdict / Armezon + Outlook + Roundup Power Max + NIS+ N-Pa-K AMS	18 oz/a / 0.5 oz/a + 12 oz/a + 22 oz/a + 0.25% v/v + 3 qt/a	99	99	99	99	150
Verdict / Roundup Power Max + Status + NIS + N-Pa-K AMS	16 oz/a / 32 oz/a + 2.5 oz/a + 0.25 % v/v + 3 qt/a	99	99	99	99	174
Anthem + Stanza / Roundup Power Max + N-Pa-K AMS	10 oz/a + 5 oz/a / 32 oz/a + 3 qt/a	99	99	99	99	160
Verdict / Roundup Power Max + Status + NIS + N-Pa-K AMS	16 oz/a / 32 oz/a + 5 oz/a + 0.25% v/v + 3 qt/a	99	99	99	99	174
<b>POST I (1 inch weeds )</b>						
Roundup WeatherMax + Dual Magnum + Laudis + Clarity + Destiny HC+ N-Pa-K AMS	32 oz/a + 1.33 pt/a + 3 oz/a + 8 oz/a + 0.5% v/v + 2 qt/a	98	99	99	98	186
Roundup WeatherMax + N-Pa-K AMS	32 oz/a + 2 qt/a	75	97	95	74	125
<b>POST I / POST IV (2-4 inch weeds) / POST IV (2-4 in regrowth)</b>						
Roundup WeatherMax + N-Pa-K AMS / Roundup WeatherMax + N-Pa-K AMS	32 oz/ a+ 3 qt/a / 32 oz/a + 3 qt/a	75	99	91	92	186
<b>POST II (2-4 inch weeds)</b>						
Harness Extra + Impact + Roundup Power Max + Destiny HC + N-Pa-K AMS	2.4 pt/a + 0.75 oz/a + 32 oz/a + 0.5% v/v 3 qt/a	0	99	99	99	160
Solstice + Roundup Power Max + COC + N-Pa-K AMS	3 oz/a + 32 oz/a + 1 % v/v + 3 qt/a	0	99	95	97	171
SureStart II + Durango + N-Pa-K AMS	2 pt/a + 32 oz/a + 3 qt/a	0	99	99	98	185
Realm Q + Abundit Extra + NIS + N-Pa-K AMS	4 oz/a + 32 oz/a + 0.25% v/v + 3 qta	0	99	96	94	165
<b>POST II / POST IV</b>						
Capreno + Roundup Power Max + N-Pa-K AMS / Laudis + Destiny HC + N-Pa-K AMS	3 oz/a + 18 oz/a + 2 qt/a / 3 oz/a + 0.5% v/v + 2 qt/a	0	99	96	99	139
<b>POST III</b>						
Roundup WeatherMax + N-Pa-K AMS	32 oz/a + 2 qt/a	0	70	97	85	145
		<b>LSD (P=0.10)</b>				<b>(P=0.20) 26</b>

**Table 4. Performance of herbicide systems for common waterhemp control in field corn on June 2, 9, 16 and 24 and grain yield at 15 percent moisture at Rochester, MN, in 2014.**

Treatment	Rate (rate/A)	Common Waterhemp				Yield (bu/A)
		6/2	6/9	6/16	6/24	
		(% Control)				
Untreated Check		0	0	0	0	27
Weed Free		100	100	100	100	180
<b>PRE</b>						
Keystone + Hornet WDG	2 qt/a + 3 oz/a	99	99	99	99	167
<b>PRE / POST II</b>						
Harness / Laudis + Clarity + Destiny HC + N-Pa-K AMS	1.7 pt/a / 3 oz/a + 8 oz/a + 0.5 % v/v + 2 qt/a	99	99	99	99	149
Breakfree / Realm Q + Abundit Extra + NIS + N-Pa-K AMS	1.5 pt/a / 4 oz/a + 32 oz/a + 0.25 % v/v + 3 qt/a	99	99	99	99	159
Breakfree / Realm Q + Abundit Extra + NIS + N-Pa-K AMS	2.5 pt/a / 4 oz/a + 32 oz/a + 0.25% v/v + 3 qt/a	99	99	99	99	160
Harness/ Roundup Power Max + N-Pa-K AMS	1.25 pt/a / 32 oz/a + 3 qt/a	99	99	99	96	152
Dual Magnum II / Halex GT + NorthStar + NIS + N-Pa-K AMS	2 pt/a / 3.6 pt/a + 2.5 oz/a + 0.25% v/v + 3 qt/a	98	99	99	99	143
Harness / Impact + Roundup Power Max + Destiny HC + N-Pa-K AMS	1.75 pt/a / 0.75 oz/a + 32 oz/a + 0.5 % v/v + 3 qt/a	99	99	99	97	142
<b>PRE / POST III (V4- V5 corn)</b>						
Zemax / Halex GT + Atrazine + NIS + N-Pa-K-AMS	1.5 qt/a / 3.6 pt/a + 1 pt/a + 0.25% v/v + 3 qt/a	99	99	99	99	180
Corvus/ Laudis + Clarity + Roundup Power Max + Destiny HC+ N-Pa-K-AMS	5.6 oz/a / 3 oz/a + 8 oz/a +32 oz/a 0.5% v/v + 2 qt/a	99	99	99	99	173
Breakfree ATZ Lite + Insigate / Abundit Extra + N-Pa-K AMS	2 qt/a + 6 oz/a / 32 oz/a + 3 qt/a	99	99	99	99	152
Zemax / Callisto GT + Atrazine + NIS + N-Pa-K AMS	1.5 qt/a / 2 pt/a + 1 pt/a + 0.25% v/v + 3 qt/a	99	99	99	99	157
Surestart II / Durango + N-Pa-K AMS	2 pt/a / 24 oz/a + 3 qt/a	99	99	99	99	148
Surestart II / Durango + N-Pa-K AMS	2.5 pt/a / 24 oz/a + 3 qt/a	99	99	99	99	156
Verdict / Armezon + Outlook + Roundup Power Max + NIS+ N-Pa-K AMS	18 oz/a / 0.5 oz/a + 12 oz/a + 22 oz/a + 0.25% v/v + 3 qt/a	99	99	99	99	150
Verdict / Roundup Power Max + Status + NIS + N-Pa-K AMS	16 oz/a / 32 oz/a + 2.5 oz/a + 0.25 % v/v + 3 qt/a	99	99	99	99	174
Anthem + Stanza / Roundup Power Max + N-Pa-K AMS	10 oz/a + 5 oz/a / 32 oz/a + 3 qt/a	99	99	99	99	160
Verdict / Roundup Power Max + Status + NIS + N-Pa-K AMS	16 oz/a / 32 oz/a + 5 oz/a + 0.25% v/v + 3 qt/a	99	99	99	99	174
<b>POST I (1 inch weeds )</b>						
Roundup WeatherMax + Dual Magnum + Laudis + Clarity + Destiny HC+ N-Pa-K AMS	32 oz/a + 1.33 pt/a + 3 oz/a + 8 oz/a + 0.5% v/v + 2 qt/a	98	99	99	98	186
Roundup WeatherMax + N-Pa-K AMS	32 oz/a + 2 qt/a	75	98	97	75	125
<b>POST I / POST IV (2-4 inch weeds) / POST IV (2-4 in regrowth)</b>						
Roundup WeatherMax + N-Pa-K AMS / Roundup WeatherMax + N-Pa-K AMS	32 oz/ a+ 3 qt/a / 32 oz/a + 3 qt/a	75	98	96	94	186
<b>POST II (2-4 inch weeds)</b>						
Harness Extra + Impact + Roundup Power Max + Destiny HC + N-Pa-K AMS	2.4 pt/a + 0.75 oz/a + 32 oz/a + 0.5% v/v 3 qt/a	0	99	99	99	160
Solstice + Roundup Power Max + COC + N-Pa-K AMS	3 oz/a + 32 oz/a + 1 % v/v + 3 qt/a	0	99	99	98	171
SureStart II + Durango + N-Pa-K AMS	2 pt/a + 32 oz/a + 3 qt/a	0	99	99	99	185
Realm Q + Abundit Extra + NIS + N-Pa-K AMS	4 oz/a + 32 oz/a + 0.25% v/v + 3 qta	0	99	99	97	165
<b>POST II / POST IV</b>						
Capreno + Roundup Power Max + N-Pa-K AMS / Laudis + Destiny HC + N-Pa-K AMS	3 oz/a + 18 oz/a + 2 qt/a / 3 oz/a + 0.5% v/v + 2 qt/a	0	99	99	99	139
<b>POST III</b>						
Roundup WeatherMax + N-Pa-K AMS	32 oz/a + 2 qt/a	0	70	99	84	145
		<b>LSD (P=0.10)</b>				<b>(P=0.20) 26</b>

**Table 5. Performance of herbicide systems for Grass control in field corn on June 2, 9, 16 and 24 and grain yield at 15 percent moisture at Rochester, MN, in 2014.**

Treatment	Rate (rate/A)	Grass				Yield (bu/A)
		6/2	6/9	6/16	6/24	
		(% Control)				
Untreated Check		0	0	0	0	27
Weed Free		100	100	100	100	180
<b>PRE</b>						
Keystone + Hornet WDG	2 qt/a + 3 oz/a	99	99	99	99	167
<b>PRE / POST II</b>						
Harness / Laudis + Clarity + Destiny HC + N-Pa-K AMS	1.7 pt/a / 3 oz/a + 8 oz/a + 0.5 % v/v + 2 qt/a	99	99	99	99	149
Breakfree / Realm Q + Abundit Extra + NIS + N-Pa-K AMS	1.5 pt/a / 4 oz/a + 32 oz/a + 0.25 % v/v + 3 qt/a	99	99	99	99	159
Breakfree / Realm Q + Abundit Extra + NIS + N-Pa-K AMS	2.5 pt/a / 4 oz/a + 32 oz/a + 0.25% v/v + 3 qt/a	99	99	99	99	160
Harness/ Roundup Power Max + N-Pa-K AMS	1.25 pt/a / 32 oz/a + 3 qt/a	99	99	99	99	152
Dual Magnum II / Halex GT + NorthStar + NIS + N-Pa-K AMS	2 pt/a / 3.6 pt/a + 2.5 oz/a + 0.25% v/v + 3 qt/a	99	99	99	99	143
Harness / Impact + Roundup Power Max + Destiny HC + N-Pa-K AMS	1.75 pt/a / 0.75 oz/a + 32 oz/a + 0.5 % v/v + 3 qt/a	99	99	99	99	142
<b>PRE / POST III (V4- V5 corn)</b>						
Zemax / Halex GT + Atrazine + NIS + N-Pa-K-AMS	1.5 qt/a / 3.6 pt/a + 1 pt/a + 0.25% v/v + 3 qt/a	99	99	99	99	180
Corvus/ Laudis + Clarity + Roundup Power Max + Destiny HC+ N-Pa-K-AMS	5.6 oz/a / 3 oz/a + 8 oz/a +32 oz/a 0.5% v/v + 2 qt/a	99	99	99	99	173
Breakfree ATZ Lite + Insigate / Abundit Extra + N-Pa-K AMS	2 qt/a + 6 oz/a / 32 oz/a + 3 qt/a	99	99	99	99	152
Zemax / Callisto GT + Atrazine + NIS + N-Pa-K AMS	1.5 qt/a / 2 pt/a + 1 pt/a + 0.25% v/v + 3 qt/a	99	99	99	99	157
Surestart II / Durango + N-Pa-K AMS	2 pt/a / 24 oz/a + 3 qt/a	99	99	99	99	148
Surestart II / Durango + N-Pa-K AMS	2.5 pt/a / 24 oz/a + 3 qt/a	99	99	99	99	156
Verdict / Armezon + Outlook + Roundup Power Max + NIS+ N-Pa-K AMS	18 oz/a / 0.5 oz/a + 12 oz/a + 22 oz/a + 0.25% v/v + 3 qt/a	99	99	99	99	150
Verdict / Roundup Power Max + Status + NIS + N-Pa-K AMS	16 oz/a / 32 oz/a + 2.5 oz/a + 0.25 % v/v + 3 qt/a	99	99	99	99	174
Anthem + Stanza / Roundup Power Max + N-Pa-K AMS	10 oz/a + 5 oz/a / 32 oz/a + 3 qt/a	99	99	99	99	160
Verdict / Roundup Power Max + Status + NIS + N-Pa-K AMS	16 oz/a / 32 oz/a + 5 oz/a + 0.25% v/v + 3 qt/a	99	99	99	99	174
<b>POST I (1 inch weeds )</b>						
Roundup WeatherMax + Dual Magnum + Laudis + Clarity + Destiny HC+ N-Pa-K AMS	32 oz/a + 1.33 pt/a + 3 oz/a + 8 oz/a + 0.5% v/v + 2 qt/a	98	99	99	99	186
Roundup WeatherMax + N-Pa-K AMS	32 oz/a + 2 qt/a	75	97	94	69	125
<b>POST I / POST IV (2-4 inch weeds) / POST IV (2-4 in regrowth)</b>						
Roundup WeatherMax + N-Pa-K AMS / Roundup WeatherMax + N-Pa-K AMS	32 oz/ a+ 3 qt/a / 32 oz/a + 3 qt/a	75	99	96	98	186
<b>POST II (2-4 inch weeds)</b>						
Harness Extra + Impact + Roundup Power Max + Destiny HC + N-Pa-K AMS	2.4 pt/a + 0.75 oz/a + 32 oz/a + 0.5% v/v 3 qt/a	0	99	99	96	160
Solstice + Roundup Power Max + COC + N-Pa-K AMS	3 oz/a + 32 oz/a + 1 % v/v + 3 qt/a	0	98	96	87	171
SureStart II + Durango + N-Pa-K AMS	2 pt/a + 32 oz/a + 3 qt/a	0	99	99	98	185
Realm Q + Abundit Extra + NIS + N-Pa-K AMS	4 oz/a + 32 oz/a + 0.25% v/v + 3 qta	0	99	98	90	165
<b>POST II / POST IV</b>						
Capreno + Roundup Power Max + N-Pa-K AMS / Laudis + Destiny HC + N-Pa-K AMS	3 oz/a + 18 oz/a + 2 qt/a / 3 oz/a + 0.5% v/v + 2 qt/a	0	98	96	93	139
<b>POST III</b>						
Roundup WeatherMax + N-Pa-K AMS	32 oz/a + 2 qt/a	0	70	98	83	145
		<b>LSD (P=0.10)</b>				<b>(P=0.20) 26</b>

**Table 6. Crop response to herbicide systems in field corn on June 2, 9, 16 and 24 and grain yield at 15 percent moisture at Rochester, MN, in 2014.**

Treatment	Rate (rate/A)	Injury (% Injured)				Yield (bu/A)
		6/2	6/9	6/16	6/24	
Untreated Check		0	0	0	0	27
Weed Free		0	0	0	0	180
<b>PRE</b>						
Keystone + Hornet WDG	2 qt/a + 3 oz/a	0	0	0	0	167
<b>PRE / POST II</b>						
Harness / Laudis + Clarity + Destiny HC + N-Pa-K AMS	1.7 pt/a / 3 oz/a + 8 oz/a + 0.5 % v/v + 2 qt/a	0	0	0	0	149
Breakfree / Realm Q + Abundit Extra + NIS + N-Pa-K AMS	1.5 pt/a / 4 oz/a + 32 oz/a + 0.25 % v/v + 3 qt/a	0	0	0	0	159
Breakfree / Realm Q + Abundit Extra + NIS + N-Pa-K AMS	2.5 pt/a / 4 oz/a + 32 oz/a + 0.25% v/v + 3 qt/a	0	0	0	0	160
Harness/ Roundup Power Max + N-Pa-K AMS	1.25 pt/a / 32 oz/a + 3 qt/a	0	0	0	0	152
Dual Magnum II / Halex GT + NorthStar + NIS + N-Pa-K AMS	2 pt/a / 3.6 pt/a + 2.5 oz/a + 0.25% v/v + 3 qt/a	0	0	0	0	143
Harness / Impact + Roundup Power Max + Destiny HC + N-Pa-K AMS	1.75 pt/a / 0.75 oz/a + 32 oz/a + 0.5 % v/v + 3 qt/a	0	0	0	0	142
<b>PRE / POST III (V4- V5 corn)</b>						
Zemax / Halex GT + Atrazine + NIS + N-Pa-K-AMS	1.5 qt/a / 3.6 pt/a + 1 pt/a + 0.25% v/v + 3 qt/a	0	0	0	0	180
Corvus/ Laudis + Clarity + Roundup Power Max + Destiny HC+ N-Pa-K-AMS	5.6 oz/a / 3 oz/a + 8 oz/a +32 oz/a 0.5% v/v + 2 qt/a	0	25	1	0	173
Breakfree ATZ Lite + Insigate / Abundit Extra + N-Pa-K AMS	2 qt/a + 6 oz/a / 32 oz/a + 3 qt/a	0	0	0	0	152
Zemax / Callisto GT + Atrazine + NIS + N-Pa-K AMS	1.5 qt/a / 2 pt/a + 1 pt/a + 0.25% v/v + 3 qt/a	0	0	0	0	157
Surestart II / Durango + N-Pa-K AMS	2 pt/a / 24 oz/a + 3 qt/a	0	0	0	0	148
Surestart II / Durango + N-Pa-K AMS	2.5 pt/a / 24 oz/a + 3 qt/a	0	0	0	0	156
Verdict / Armezon + Outlook + Roundup Power Max + NIS+ N-Pa-K AMS	18 oz/a / 0.5 oz/a + 12 oz/a + 22 oz/a + 0.25% v/v + 3 qt/a	0	0	0	0	150
Verdict / Roundup Power Max + Status + NIS + N-Pa-K AMS	16 oz/a / 32 oz/a + 2.5 oz/a + 0.25 % v/v + 3 qt/a	0	22	0	0	174
Anthem + Stanza / Roundup Power Max + N-Pa-K AMS	10 oz/a + 5 oz/a / 32 oz/a + 3 qt/a	0	0	0	0	160
Verdict / Roundup Power Max + Status + NIS + N-Pa-K AMS	16 oz/a / 32 oz/a + 5 oz/a + 0.25% v/v + 3 qt/a	0	34	0	0	174
<b>POST I (1 inch weeds )</b>						
Roundup WeatherMax + Dual Magnum + Laudis + Clarity + Destiny HC+ N-Pa-K AMS	32 oz/a + 1.33 pt/a + 3 oz/a + 8 oz/a + 0.5% v/v + 2 qt/a	10	6	0	0	186
Roundup WeatherMax + N-Pa-K AMS	32 oz/a + 2 qt/a	0	0	0	0	125
<b>POST I / POST IV (2-4 inch weeds) / POST IV (2-4 in regrowth)</b>						
Roundup WeatherMax + N-Pa-K AMS / Roundup WeatherMax + N-Pa-K AMS	32 oz/ a+ 3 qt/a / 32 oz/a + 3 qt/a	0	0	0	0	186
<b>POST II (2-4 inch weeds)</b>						
Harness Extra + Impact + Roundup Power Max + Destiny HC + N-Pa-K AMS	2.4 pt/a + 0.75 oz/a + 32 oz/a + 0.5% v/v 3 qt/a	0	24	3	5	160
Solstice + Roundup Power Max + COC + N-Pa-K AMS	3 oz/a + 32 oz/a + 1 % v/v + 3 qt/a	0	23	4	0	171
SureStart II + Durango + N-Pa-K AMS	2 pt/a + 32 oz/a + 3 qt/a	0	0	0	0	185
Realm Q + Abundit Extra + NIS + N-Pa-K AMS	4 oz/a + 32 oz/a + 0.25% v/v + 3 qta	0	0	0	0	165
<b>POST II / POST IV</b>						
Capreno + Roundup Power Max + N-Pa-K AMS / Laudis + Destiny HC + N-Pa-K AMS	3 oz/a + 18 oz/a + 2 qt/a / 3 oz/a + 0.5% v/v + 2 qt/a	0	0	0	0	139
<b>POST III</b>						
Roundup WeatherMax + N-Pa-K AMS	32 oz/a + 2 qt/a	0	0	0	5	145
	<b>LSD (P=0.10)</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>(P=0.20) 26</b>